Appendices

Appendix A - Federal and State Laws, Regulations, and Executive Orders:

The National Environmental Policy Act (NEPA) of 1969, as amended

The purposes of this Act are "To declare a national policy which will encourage productive and enjoyable harmony between man and his environment, to promote efforts which will prevent or eliminate damage to the environment and biosphere and stimulate the health and welfare of man; to enrich the understanding of the ecological systems and natural resources important to the Nations; and to establish a Council on Environmental Quality" (42 U.S.C. Sec. 4321). The law further states "it is the continuing policy of the Federal Government, in cooperation, to use all practicable means and measures, including financial and technical assistance, in a manner calculated to foster and promote the general welfare, to create and maintain conditions under which man and nature can exist in productive harmony, and fulfill the social, economic, and other requirements of the present and future generations of Americans. This law essentially pertains to public participation, environmental analysis, documentation and appeals.

NEPA establishes the format and content requirements of environmental analysis and documentation such as the Niner project analysis. The entire process of preparing an environmental assessment was undertaken to comply with NEPA requirements, as codified by 40 CFR 1501 and the Forest Service Handbook 1909.15, Chapter 40.

The National Forest Management Act (NFMA) of 1976

This Act guides development and revision of National Forest Land Management Plans and addresses a range of activities from required reporting that the Secretary must submit annually to Congress to preparation requirements for timber sale contracts. There are several important sections within the act, including Section 1 (purpose and principles), Section 19 (fish and wildlife resources), Section 23 (water and soil resources), and Section 27 (management requirements that relate to perspective project planning).

All alternatives were developed to be in full compliance with NFMA via compliance with the Willamette National Forest Land and Resource Management Plan, as amended. This EA contains references as to how this project complies with Forest Plan and Northwest Forest Plan standards and guidelines. The Silvicultural Prescription in the Analysis File contains a discussion of compliance with NFMA's requirement to identify lands unsuited for management and the requirement to achieve reforestation within five years.

The Endangered Species Act of 1973, as amended

The purposes of this Act are to "provide a means whereby the ecosystems upon which endangered species and threatened species depend may be conserved, to provide a program for the conservation of such endangered species and threatened species, and to

take such tests as may be appropriate to achieve the purpose of the treaties and conventions set forth in subsection (a) of this section." The Act also states "It is further declared to be the policy of Congress that all Federal departments and agencies shall seek to conserve endangered species and threatened species and shall utilize their authorities in furtherance of the purposes of this Act."

Field surveys, Biological Evaluations, and Biological Assessments for all listed endangered, threatened, or sensitive species have been conducted to determine possible effects of any proposed activities in the Niner project area (see the Wildlife and Plant Biological Evaluations, and Fish Biological Assessment in the Analysis File).

The Clean Water Act, as amended in 1977 and 1982

The primary objective of this Act is to restore and maintain the integrity of the Nation's waters. This objective translates into two fundamental national goals: 1. Eliminate the discharge of pollutants into the nation's waters; and 2. Achieve water quality levels that are fishable and swimmable. This Act establishes a non-degradation policy for all federally proposed projects. Under Section 303(d) of the Clean Water Act, the State has identified water quality-limited water bodies in Oregon. Fall Creek is the only water body in the project area that is on the 303(d) list due to elevated temperatures.

All action alternatives including associated mitigation actions and BMPs are consistent with current management direction including Willamette Forest Plan Standards and Guidelines, Aquatic Conservation Strategy (ACS) Objectives (at the watershed analysis area) and the Federal Clean Water Act. Implementation of required BMPs would insure protection of water quality and beneficial uses under all alternatives. Although the main stem of NFMFWR is currently listed as water quality limited due to elevated summer water temperatures, retention of no harvest buffers within the effective shade zone of NFMFWR would result in a negligible affect in the short-term on stream temperature in NFMFWR.

The Clean Air Act, as amended in 1990

The purposes of this Act are "to protect and enhance the quality of the Nation's air resources so as to promote the public health and welfare and the productive capacity of its population; to initiate and accelerate a national research and development program to achieve the prevention and control of air pollution; to provide technical and financial assistance to state and local governments in connection with the development and execution of their air pollution prevention and control programs; and to encourage and assist the development and operation of regional air pollution prevention and control programs."

The action alternatives are designed to meet the National Ambient Air Quality Standards, as direction by the Oregon Smoke Management Act, through avoidance of practices which degrade air quality below health and visibility standards.

National Historic Preservation Act of 1966, as amended

This Act requires Federal agencies to consult with American Indian Tribes, and various State and local groups before nonrenewable cultural resources, such as archaeological and historic structures, are damaged or destroyed. Section 106 of this Act requires

Federal agencies to review the effects project proposals may have on the cultural resources in the Analysis Area.

The areas proposed for ground-disturbing activities have been surveyed and evaluated for the presence of inventoried cultural resources. Several areas containing these resources have been identified. The alternatives were either designed to avoid or exclude these areas from any management activities, have mitigated the effects by protecting the sites with down logs, and or minimized the site disturbances with yarding log suspension requirements. (See Mitigation Measure section and the Project Review for Heritage Resources form in the Analysis File).

Executive Order 13186 (Migratory Bird)

On January 10, 2001, President Clinton signed an Executive Order (E.O. 13186) titled "Responsibilities of Federal Agencies to Protect Migratory Birds." This E.O. requires the "environmental analysis of Federal actions, required by NEPA or other established environmental review processes, evaluates the effects of actions and agency plans on migratory birds, with emphasis on species of concern."

Current science applied to S&Gs governing management of this area provide direction that would ensure the long term maintenance of amount and distribution of suitable habitat for native residents and migratory land bird species. The spatial and temporal extent of proposed activities that would result in disturbance to nesting birds in a small portion of the project area would mitigate the overall potential for disturbance and provide protection for nesting birds as intended under the Migratory Bird Treaty Act.

Prime Lands

The Secretary of Agriculture issued memorandum 1827 which is intended to protect prime farm lands and rangelands. The project area does not contain any prime farmlands or rangelands. Prime forestland is not applicable to lands within the National Forest System. National Forest System lands would be managed with consideration of the impacts on adjacent private lands. Prime forestlands on adjacent private lands would benefit indirectly from a decreased risk of impacts from wildfire. There would be no direct, indirect, or cumulative adverse effects to these resources and thus are in compliance with the Farmland Protection Act and Departmental Regulation 9500-3, “Land Use Policy”.

Executive Order 13112 (Invasive Species)

This 1999 order requires Federal agencies whose actions may affect the status of invasive species to identify those actions and within budgetary limits, "(i) prevent the introduction of invasive species; (ii) detect and respond rapidly to and control populations of such species… (iii) monitor invasive species populations… (iv) provide for restoration of native species and habitat conditions in ecosystems that have been invaded;…(vi) promote public education on invasive species… and (3) not authorize, fund, or carry out actions that it believes are likely to cause or promote the introduction or spread of invasive species… unless, pursuant to guidelines that it has prescribed, the agency had determined and made public… that the benefits of such actions clearly outweigh the potential harm caused by invasive species; and that all feasible and

prudent measures to minimize risk of harm will be taken in conjunction with the actions."

The action alternatives implement the direction from the Willamette Forest Plan and the Integrated Weeds Management EA. The action alternatives include mitigating measure (see Chapter 2 – Mitigation Common to All Alternative – Invasive Weeds) which would limit the spread of invasive weeds. Mitigating measures include the cleaning of off road equipment between infested work sites, pre-treating roads before road maintenance and reconstruction, re-vegetating all disturbed areas with weed-free mulch and native seed, and monitoring weed infestations following treatments..

Energy Requirement and Conservation Potential

There are no unusual energy requirements for implementing any of the alternatives

Alternatives which involve tree removal would create supplies of firewood as a by-product of the timber harvest. This product would contribute to the local supply of energy for home space heating.

Both action alternatives propose helicopter yarding of timber. Helicopter yarding is often considered to have high fuel requirements. Though helicopters may use more fuel per unit of time than other yarding equipment, they are more productive and do not need to be operated for as long as more convention yarding equipment for a given timber volume. Helicopter yarding also avoids the need to consume fuel for road construction. Analysis has shown that the energy used for helicopter use is not unusually excessive in comparison with other methods of accessing large timber.

State Laws

Oregon State Best Management Practices (BMPs) - State BMPs are employed to maintain water quality and are certified by the Environmental Protection Agency for meeting the Clean Water Act.

The Oregon Smoke Management Plan - The Oregon State Implementation Plan and the Oregon State Smoke Management Plan would be followed to maintain air quality. See Fire and Fuel prescription the Analysis File.

Consultation with the Oregon State Historic Preservation Officer (SHPO) has been completed concerning proposed activities. SHPO has concurred with the finding that there are historic properties but the undertaking would have no effect on them as defined by 36 CFR 800.16(i). The Advisory Council on Historic Preservation (ACHP) has also been consulted about measures to protect significant archeological sites from adverse effects (see the Project Review for Heritage Resources Form in the Analysis File).

Appendix B - Cumulative Effects Analyses

Past, Present, and Foreseeable Future Activities in the North Fork of the Middle Fork River Watershed

For the majority of the cumulative effects analyses, the analysis area was defined by the boundary used in the 1995 North Fork of the Middle Fork River Watershed Analysis. This analysis area was used in order to remain consistent and comparable with the Watershed Analysis. The boundary is a delineation of topographical and hydrologic boundaries of the watershed drained by North Fork of the Middle Fork River. The cumulative effects analysis includes the history of harvest and road building which started in the early 1900s and the effects of timber harvest and road systems on vegetation, wildlife habitat, air quality, recreation, water quality, fisheries, and hydrology of the watershed. The analysis includes future harvest projects for which the NEPA process has begun. The table below presents a summary of activities which have occurred in the past, present and foreseeable future within the North Fork of the Middle Fork River watershed. The listing includes the small amount of private lands within the watershed. Vegetation conditions for the private lands were estimated from aerial photography. The various resource analyses may have used a subset of these activities, depending on the size of the appropriate analysis area, for instance, either single or multiple 6th field sub-watersheds.

Table 1 - Summary by decade of past, present, and future activities in North Fork of the Middle Fork Willamette River Watershed.

Decade	Activity	Acres
Past Activities		
1920's	Clearcuts	449
	Partial Cuts - Salvage	0
	Shelterwoods	0
	Pre-commercial Thin	0
	Commercial Thins	0
1930's	Clearcuts	464
	Partial Cuts - Salvage	592
	Shelterwoods	592
	Pre-commercial Thins	0
	Commercial Thins	0

Decade	Activity	Acres
1940's	Clearcuts	4759
	Partial Cuts - Salvage	116
	Shelterwoods	0
	Pre-commercial Thins	0
	Commercial Thins	0
1950's	Clearcuts	4796
	Partial Cuts - Salvage	1909
	Shelterwoods	0
	Pre-commercial Thins	0
	Commercial Thins	105
1960's	Clearcuts	7784
	Partial Cuts - Salvage	1036
	Shelterwoods	0
	Pre-commercial Thins	0
	Commercial Thins	0
1970's	Clearcuts	6049
	Partial Cuts - Salvage	3376
	Shelterwoods	386
	Pre-commercial Thins	224
	Commercial Thins	1802
1980's	Clearcuts	8248
	Partial Cuts - Salvage	1800
	Shelterwoods	418
	Pre-commercial Thins	4664
	Commercial Thins	2365

Decade	Activity	Acres
1990's	Clearcuts	1709
	Partial Cuts - Salvage	3641
	Shelterwoods	277
	Pre-commercial Thins	49047
	Commercial Thins	3117
2000's	Clearcuts	54
	Partial Cuts - Salvage	260
	Shelterwoods	24
	Pre-commercial Thins	1169
	Commercial Thins	245
Present and Future Activities		
2006-2010	Clearcuts	258
	Partial Cuts - Salvage	0
	Shelterwoods	0
	Pre-commercial Thins	2450
	Commercial Thins	4096

Current or Future Timber Sales

Commercial Thinning Project

Jump Up – 643 acres

Christy Thin – 640 acres

Trove Thin – 430 acres

Battle Thin – 572 acres

Lorax Thin - 382 acres

Grass Thin – 536 acres

Angel Thin – 269 acres

Lode Thin – 513 acres

Moss Thin – 356 acres

Regeneration Harvest

SourDean ATV – 127 acres

Sitka ATV – 104 acres

Fawn ATV – 81 acres

Road Systems in the North Fork of the Middle Fork River Watershed

The first primitive "truck trail" roads built in the watershed began in early 1900's for the primary purpose of administrative access for fire protection. In the 1920's and 1930's, the lower portion of the watershed was accessed with a network of roads and railways associated with the Western Lumber Company and the North Fork Timber Sale. In the late 1940's, the emphasis was still to develop a road system for effective fire protection, but the demand for timber products increased significantly and lower use project roads, such as roads within a timber sale area, were constructed. In the early 1950's the road design standards were improved and many of the main access roads were built. The vast majority of the roads in the watershed were constructed from the 1960's through the 1980's when the demand for timber and recreation access to public lands dramatically increased. Road construction was minimal in the 1990's with the decline in timber targets and emphasis shifted toward closing of roads given limited road maintenance budgets.

The North Fork of the Middle Fork River watershed has approximately 570 miles of roads. The current road system consist of about 33 miles of paved arterials roads, 177 miles of aggregate surface collector roads, 360 miles of improved surface local roads. There are about 5 miles of city and county roads, and 15 miles of private roads. The Middle Fork District Supplemental Road Analysis recommends closing 246 mile of roads this decade. And there is about 147 miles of trails in the watershed.

Other Future Activities

The North Fork of the Middle Fork River corridor will continue to have a high level of recreation use in the developed and dispersed sites, trails, and roads which would contribute to cumulative effects on the watershed. Many routine maintenance activities will continued to occur throughout the watershed. They include road maintenance, hazard tree assessment and management, and recreation facility maintenance, and silvicultural maintenance and improvements to the managed plantations.